

STIC Search Results Feedback Form

EIC 2100

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Alyson Dill, EIC 2100 Team Leader
272-3527, RND 4B28

Voluntary Results Feedback Form

➤ I am an examiner in Workgroup: Example: 2133

➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(Journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC/EIC2100 RND, 4B28

SEARCH NOTES

Biagini, Chris 10719182 NPL fulltext.doc

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*File 624: Homeland Security & Defense and 9 Platt energy journals added Please see HELP NEWS624 for more
[File 369] **New Scientist** 1994-2007/Jul W5
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[File 484] **Periodical Abs Plustext** 1986-2007/Jul W5
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(c) 2007 PR Newswire Association Inc. All rights reserved.
*File 613: File 613 now contains data from 5/99 forward. Archive data (1987-4/99) is available in File 813.
[File 813] **PR Newswire** 1987-1999/Apr 30
(c) 1999 PR Newswire Association Inc. All rights reserved.
[File 634] **San Jose Mercury** Jun 1985-2007/Aug 15
(c) 2007 San Jose Mercury News. All rights reserved.
[File 370] **Science** 1996-1999/Jul W3
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*File 370: This file is closed (no updates). Use File 47 for more current information.
[File 553] **Wilson Bus. Abs.** 1982-2007/Aug
(c) 2007 The HW Wilson Co. All rights reserved.
[File 98] **General Sci Abs** 1984-2007/Jul
(c) 2007 The HW Wilson Co. All rights reserved.

Set	Items	Description
S1	244	S ((STEINER(1W)(TREE? ? OR NODE OR POINT? ? OR VERTICE? ?)) OR (S())STEINER(1W)(TREE? ? OR NODE OR POINT? ? OR VERTICE? ?)) OR NASH()WILLIAMS()TUTTE(2N)THEOR????? OR ((NASH(1W)WILLIAMS(1W)TUTTE(2N)THEOR?????))
S2	2821	S ((STEINER(1W)TREE? ? OR TREE? ? OR NODE OR POINT? ? OR VERTICE? ?)(5N)(SET OR SUBSET OR SUB()SET))(10N)(NODE OR STRUCTURE? ?)
S3	261366	S ((STEINER(1W)TREE? ? OR TREE? ? OR NODE OR POINT? ? OR VERTICE? ?)(10N)(CLIENT? ? OR ENTIT??? OR NODE))
S4	12	S S1(20N)(CREAT??? OR GENERAT???)
S5	13	S (S1(10N)(MERG??? OR PACK??? OR TOGETHER OR MIX??? OR BLEND??? OR BINDING OR BOUND OR COMBIN??? OR CONSOLIDAT??? OR COMPRESS??? OR CONDENS??? OR JOIN?????))
S6	148	S (STEINER(1W)TREE? ?)

S7 10 S (S1(5N)(MERG??? OR PACK??? OR TOGETHER OR BINDING OR COMBIN??? OR CONSOLIDAT??? OR JOIN?????))

S8 18 S (S1(20N)(MERG??? OR PACK??? OR TOGETHER OR MIX??? OR BLEND??? OR BINDING OR BOUND OR COMBIN??? OR CONSOLIDAT??? OR COMPRESS??? OR CONDENS??? OR JOIN?????))

S9 17 RD (unique items)

?

Higher relevance

d

Subject summary

? t /3,k/all

9/3,K/1 (Item 1 from file: 15) [Links](#)

Fulltext available through: [ScienceDirect](#)

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03180443 939710741

An Algorithmic Framework for the Exact Solution of the Prize-Collecting Steiner Tree Problem

Ljubic, Ivana; Weiskircher, Rene; Pfersch, Ulrich; Klau, Gunnar W; Mutzel, Petra; Fischetti, Matteo

Mathematical Programming v105n2-3 pp: 427

Feb 2006

ISSN: 0025-5610 Journal Code: MTHP

Abstract:

...implementation of a branch-and-cut algorithm based on a directed graph model where we combine several state-of-the-art methods previously used for the **Steiner tree** problem. Our method outperforms the previously published results on the standard benchmark set of problems...

9/3,K/2 (Item 2 from file: 15) [Links](#)

Fulltext available through: [ScienceDirect](#)

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03131968 1079244711

Approximations and Lower Bounds for the Length of Minimal Euclidean Steiner Trees

Rubinstein, J H; Weng, J; Wormald, N

Journal of Global Optimization v35n4 pp: 573-592

Aug 2006

ISSN: 0925-5001 Journal Code: GLPT

Abstract:

We give a new lower bound on the length of the minimal **Steiner tree** with a given topology joining given terminals in Euclidean space, in terms of toroidal images. The lower bound is equal to the length when the topology is full. We use the lower bound to prove bounds on the "error" ϵ in the length of an approximate **Steiner tree**, in terms of the maximum deviation d of an interior angle of the tree from...

9/3,K/3 (Item 3 from file: 15) [Links](#)

Fulltext available through: [ScienceDirect](#)

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03112162 1095338691

STEINER TREE PROBLEMS WITH PROFITS

Costa, Alysson M; Cordeau, Jean-Francois; Laporte, Gilbert

INFOR v44n2 pp: 99-108, 112-115

May 2006

ISSN: 0315-5986 Journal Code: IOR

Word Count: 8076

Text:

...19: 549-567.

Engevall, S., Gothe-Lundgren, M., and Varbrand, P. (1998). A stronger lower bound for the node weighted **Steiner tree** problem, *Networks* 31: 11-17.

Feigenbaum, J., Papadimitriou, C. H., and Shenker, S. (2001). Sharing...

...I., Moser, A., Mutzel, P., Neuner, P., Pfersch, U., Raidl, G., and Weiskircher, R. (2004). Combining a memetic algorithm with integer programming to solve the prize-collecting **Steiner tree**

problem, *Springer Lecture Notes in Computer Science* 3102: 1304-1315.

Klau, G. W., Ljubic, I...

9/3,K/4 (Item 4 from file: 15) [Links](#)

Fulltext available through: [ScienceDirect](#)

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02875197 798937791

The implications of Robert L. Steiner's work for merger analysis

Nelson, Philip; Hurdle, Gloria; Su, Tessie

Antitrust Bulletin v49n4 pp: 1013-1042
Winter 2004
ISSN: 0003-603X Journal Code: ANB
Word Count: 10103
Text:

...open question as to how frequently this type of Type III scenario will occur. As **Steiner** points out, a **merger** is unlikely to lead to significant changes in advertising and promotional efforts in "mature, heavily...
...and provide insights into the businessmen's understanding of about market elasticities).65
In sum, **Steiner** points out the crucial problem of using retail pricing data to assess **mergers** between manufacturers of consumer goods. While this problem is recognized by some economists and antitrust...

9/3,K/5 (Item 5 from file: 15) [Links](#)
Fulltext available through: [ScienceDirect](#)
ABI/Inform(R)
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02875192 798937731
Steiner's two-stage vision: implications for antitrust analysis
Comanor, William S
Antitrust Bulletin v49n4 pp: 999-1012
Winter 2004
ISSN: 0003-603X Journal Code: ANB
Word Count: 4345
Text:

...The relevant issue again is whether distribution margins would remain unchanged in the new circumstances.
Steiner points to the situation of a **merger** between two branded but minimally advertised product manufacturers, and suggests that this type of **merger** might not lead to higher prices. If a newly combined firm sought to raise prices...

9/3,K/6 (Item 6 from file: 15) [Links](#)
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02766503 654922801
Packing Steiner trees with identical terminal sets
Kaski, Petteri
Information Processing Letters v91n1 pp: 1-5
Jul 16, 2004
ISSN: 0020-0190 Journal Code: IPL
Packing Steiner trees with identical terminal sets
Abstract:

This paper investigates the variant of the **Steiner tree packing** problem in which all the terminal sets are identical.

9/3,K/7 (Item 7 from file: 15) [Links](#)
Fulltext available through: [ScienceDirect](#)
ABI/Inform(R)
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02362454 111998764
Heuristic algorithms for packing of multiple-group multicasting
Wang, Chu-Fu; Liang, Chun-Teng; Jan, Rong-Hong
Computers & Operations Research v29n7 pp: 905-924
Jun 2002
ISSN: 0305-0548 Journal Code: CRO
Abstract:

...sessions under a capacity limited constraint is considered. This problem is formulated as a tree **packing** problem. Two heuristic algorithms, **Steiner-tree-based** heuristic (STH) algorithm and cut-set-based heuristic (CSH) algorithm, are presented for solving...

9/3,K/8 (Item 8 from file: 15) [Links](#)

Fulltext available through: [ScienceDirect](#)

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02317254 109582962

A branch-and-price algorithm for the Steiner tree packing problem

Jeong, Gue-woong; Lee, Kyungsik; Park, Sungsoo; Park, Kyungchul

Computers & Operations Research v29n3 pp: 221-241

Mar 2002

ISSN: 0305-0548 Journal Code: CRO

A branch-and-price algorithm for the Steiner tree packing problem

Abstract:

This paper deals with the **Steiner tree packing** problem. For a given undirected graph $G=(V,E)$ with positive integer capacities and non...

9/3,K/9 (Item 9 from file: 15) [Links](#)

Fulltext available through: [ScienceDirect](#)

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00780605 94-29997

Approximating the tree and tour covers of a graph

Arkin, Esther M; Halldorsson, Magnus M; Hassin, Refael

Information Processing Letters v47n6 pp: 275-282

Oct 18, 1993

ISSN: 0020-0190 Journal Code: IPL

Abstract:

...algorithms are provided for both problems. An interesting feature of the algorithms is how they combine approximations of other problems, namely the weighted vertex cover, traveling salesman, and **Steiner tree** problems.

9/3,K/10 (Item 10 from file: 15) [Links](#)

Fulltext available through: [ScienceDirect](#)

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00538535 91-12879

Lower Bounds for Rectilinear Steiner Trees in Bounded Space

Snyder, Timothy Law

Information Processing Letters v37n2 pp: 71-74

Jan 31, 1991

ISSN: 0020-0190 Journal Code: IPL

Abstract:

...Hanan Theorem to keep Steiner points out of the picture when constructing a minimal rectilinear **Steiner tree**. It is noted that the dimension d does not appear in the present **bound** and that perhaps the methods of Smith (1988) could improve the present bounds by involving...

9/3,K/11 (Item 11 from file: 15) [Links](#)

Fulltext available through: [ScienceDirect](#)

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00521471 90-47228

Directed Steiner Tree Problem on a Graph: Models, Relaxations, and Algorithms

Dror, Moshe; Gavish, Bezalel; Choquette, Jean

INFOR v28n3 pp: 266-281

Aug 1990

ISSN: 0315-5986 Journal Code: IOR

Abstract:

...the problem. Computational tests on 18 problems used by Beasley (1984, 1987) for testing undirected **Steiner tree** problems show that one of the algorithms generates lower **bound** values that are close to the optimal solutions. The nonfeasible solutions generated by the Lagrangean...

9/3,K/12 (Item 12 from file: 15) [Links](#)

Fulltext available through: [ScienceDirect](#)

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00433561 89-05348

Worst-Case Performance of Rayward-Smith's Steiner Tree Heuristic

Waxman, Bernard M.; Imase, Makoto

Information Processing Letters v29n6 pp: 283-287

Dec 8, 1988

ISSN: 0020-0190 Journal Code: IPL

Abstract:

...the minimum distance tree heuristic. An analysis proves that the worst-case performance of the Steiner tree approximation algorithm by RS is within 2 times optimal and that 2 is the best bound in the sense that there are instances for which RS will do worse than any...

9/3,K/13 (Item 1 from file: 275) [Links](#)

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02565740 Supplier Number: 80896951

A branch-and-price algorithm for the Steiner tree packing problem.(Statistical Data Included)

Jeong, Gue-wong; Lee, Kyungsik; Park, Sungsoo; Park, Kyungchul

Computers & Operations Research, 29, 3, 221(21)

March, 2002

Document Type: Statistical Data Included

ISSN: 0305-0548

Language: English Record Type: Abstract

A branch-and-price algorithm for the Steiner tree packing problem.(Statistical Data Included)

Abstract: A branch-and-price algorithm is developed for the Steiner tree packing problem. The results show the algorithm can compete with the cutting plane algorithm for sizing...

9/3,K/14 (Item 1 from file: 148) [Links](#)

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0022059896 Supplier Number: 161502268 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Properties of a generalized source-to-all-terminal network reliability model with diameter constraints *.

Cancela, Hector; Petingi, Louis

Omega, 35, 6, 659(12)

Dec, 2007

ISSN: 0305-0483

Language: English

Record Type: Fulltext; Abstract

Word Count: 9256 Line Count: 00680

...each arc is assigned a weight corresponding to the delay to be experienced by a packet traveling along this arc.

Extensive research has been done in this area (see (5-11)) in order to construct Steiner trees containing the source s and the destination nodes (i.e. terminal nodes), in such a way that a packet traveling from the source to a terminal node meets the delay constraints.

Other related reliability...

9/3,K/15 (Item 1 from file: 369) [Links](#)

Fulltext available through: [ScienceDirect](#)

New Scientist

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00101756 14319322.500 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Science: An angle on how to join up the dots

WATSON, ANDREW; MELBOURNE

New Scientist, vol. 143, no. 1932, p. Page 15

July 2, 1994

Language: English Record Type: Fulltext Doc. Type: Journal

Word Count: 987 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Text:

...connect them with the shortest possible path, making use where necessary of additional points called Steiner vertices. For example,

the shortest path joining all the vertices of the triangle shown in the Figure, meet at a new point...

...NP-hard.

The Steiner problem becomes 'easy' if the pattern showing which points will be joined to which is known, together with the rough position of the Steiner vertices. This is the same as knowing in advance the overall layout of the pieces in...
...and Applied Mathematics Journal of Discrete Mathematics, relies on the fact that the three lines joining at an introduced Steiner point always meet at 120 degrees. The researchers begin by classifying the few ways a Steiner...

9/3,K/16 (Item 1 from file: 484) [Links](#)
Periodical Abs Plustext
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06888152 (USE FORMAT 7 OR 9 FOR FULLTEXT)
"Mathematical Games" and Beyond: Part II of an Interview with Martin Gardner
Albers, Don
College Mathematics Journal (PCMJ) , v36 n4 , p 301-314
Sep 2005
ISSN: 0746-8342 Journal Code: PCMJ
Document Type: Interview
Language: English Record Type: Fulltext; Abstract
Word Count: 6630
Text:

...the dissection in his classic, Introduction to Geometry.) (2) I found a minimal network of Steiner trees that join all the corners of a chessboard. (3) I constructed a bicolor proof that every serial...

9/3,K/17 (Item 2 from file: 484) [Links](#)
Periodical Abs Plustext
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04848430 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Voices in the junior high school classroom: Lost and found
Hamblin, Lynda
English Journal (GENJ) , v90 n1 , p 80-87
Sep 2000
ISSN: 0013-8274 Journal Code: GENJ
Document Type: Feature
Language: English Record Type: Fulltext; Abstract
Word Count: 5205
Text:

...below" (107). These, too, become a part of the voice of her poems. As John-Steiner points out "Remembering such carefully observed details, writers choose a starting point for their intricate task of weaving together resonant language with the themes of their intellectual and emotional concerns" (127).

Again, it is...